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Gencore version 5.1.6

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OM nucleic - nucleic search, using sw model

Run on:

August 4, 2003, 12:21:43; Search time 4228 Seconds

(without alignments)

16632.840 Million cell updates/sec

171tle:
Perfect score: 1719
Sequence:
1991-082-894-1

Ferfect score: 1719
Scoring table: IDENTITY_NUC
Gapop 10.0, Gapext 1.0

Searched: 2888711 seqs, 20454813386 residues

Total number of hits satisfying chosen parameters: 5777422

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%
Listing first 45 summaries
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Listing first 45 summaries

Database : GenEmbl:*

1: 9b_ba:*

GenEmbl:*

1 9b.ba:*
2 9b.ba:*
3 9b.ln:*
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Pred. No. is the number of results predicted by chance to have a

em_htgo_mus:* em_htgo_other:*

em_htgo_hum: *

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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ALIGNMENTS

AB033336 1563 bp mRNA linear PLN 30-AUG-2000	Aspergillus oryzae gpmA cds.	AB033336	AB033336.1 GI:9955874	Phosphoglyceromutase.	Asperqillus oryzae		Eukaryota; Fungi; Ascomycota; Pezizomycotina; Eurotiomycetes;	Eurotiales; Trichocomaceae; mitosporic Trichocomaceae; Aspergillus.	1 (bases 1 to 1563)	Nakajima, K., Kunihiro, S., Sano, M., Eto, S. and Machida, M.	Molecular cloning and characterization of glycolytic gene from
RESULT 1 AB033336 LOCUS	DEFINITION	ACCESSION	VERSION	KEYWORDS	SOURCE	ORGANISM			REFERENCE	AUTHORS	TITLE

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Lu,J., Nogl,Y. and Takami,H. Oceanobaclius iheyensis gen. nov., sp. nov., a deep-sea extremely halotolerant and alkaliphilic species isolated from a depth of 1050 m on the Iheya Ridge FEMS Microbiol. Lett. 205 (2), 291-297 (2001) 21623015
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Oceanobacillus iheyensis HTEB31 genomic DNA, section 9/13.
AP004601 BA000028
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Takami,H., Takaki,Y. and Uchiyama,I.
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Aspergillus oryzae
Published Only in DataBase (2000)
2 (bases 1 to 1563)
Nakajima,K., Kunihiro,S., Sano,M., Eto,S. and Machida,M.
Direct Submission
Submitted (06-OCT-1999) Keiichi Nakajima, National Institute of Submitted (106-OCT-1999) Keiichi Nakajima, National Institute of Tsukuba, Ibaraki 305-8566, Japan (E-maul: Bloogy; Higashi 1-1, Tsukuba, Ibaraki 305-8566, Japan (E-maul: nakajima@nibh.go.jp, Tel:81-298-54-6214, Fax:81-298-54-6240)
sequence updated (27-Oct-1999).
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0; Mismatches 517; Indels
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JOURNAL MEDLINE

TITLE

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MNKPHIVILGAGYGGMMAARMQKLIHSNEAKITLVNKNDYHYQ
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SLQSRCVEIINDATVKACAEDSIIVEKGSERIKISTKSVIWTMAGTKANSIVERLIALSM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(2702. .3375)
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/transl_table=11
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YDCLCLSIITTLNISHKPTFIIYKNHKR"
Genome sequence of Oceanobacillus iheyensis isolated from the Iheya Ridge and its unexpected adaptive capabilities to extreme environments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="FTS system, histidine-containing phosphocarrier protein (HPr protein)"

protein (HPr protein)"

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/db_xref="GI:22778930"

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MYGYTGTYKGERVSVQGTGMGVPSISIYVNELIQSYDVKKLIRVGTCGAIQKDVNVRD
VILAQGATTDSQMNRLIFNGIDYAPIADFELLKNAYDAGVDKGLHLRVGNVFTSDTFY
                                                                                                                                                             Takami, H., Takaki, Y. and Chee, G.

Takami, H., Takaki, Y. and Chee, G.

Direct Submission

Bubmitted (26-DEC-2001) Hideto Takami, Japan Marine Science and
Technology Center, Deep-sea Microorgaisms Research Group; 2-15

Natsushima-cho, Yokosuka, Kanagawa 237-0061, Japan

(E-mail: takamih@jamstec.go.jp,
URL:http://www.jamstec.go.jp,
Tel:81-468-67-9645, Fax:81-468-67-9645)

1. .299850
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QTTFNDMMEIALDTIIK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Oceanobacillus iheyensis HTE831"
/mol_type="genomic DNA"
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                                                                                    Nucleic Acids Res. 30 (18), 3927-3935 (2002)
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95. .487
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Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium Science 282 (5396), 2012-2018 (1998)
            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis
1 (bases 1 to 36296)
Waterston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department of Genetics, Washington University
St. Louis , MO 63110, USA, and
Sanger Centre, Hinxton Hall
                                                                                                                                                                                                                                                          Genetics,
                                                                                                                                                                                                                                                          Department of Gen
Park Avenue, St.
                                                                                                                                                             Greco,T., Elliott,G. and Keppler,D.
The sequence of C. elegans cosmid F57Bl0
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University, 4444 Forest
4 (bases 1 to 36296)
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3 (bases 1 to 36296)
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9 (bases 1 to 36296)
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Missouri 63108, USA
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University, Genome Sequencing Center, 4444 Forest Park Avenue, St.
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Submittaed (19-APR-2002) Department of Genetics, Washington
University, Genome Sequencing Center, 4444 Forest Park Avenue,
Louis, MO 63110, USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (26-DEC-2002) Department of Genetics, Washington University, Genome Sequencing Center, 4444 Forest Park Avenue, Louis, MO 63110, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (20-JUL-2002) Department of Genetics, Washington
University, Genome Sequencing Center, 4444 Forest Park Avenue,
Louis, MO 63110, USA
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more than one m13 subclone

analysis see: http://www.wormbase.org/db/seq/sequence?name=F57B10;class=Sequence For a graphical representation of this cosmid sequence and its

NEIGHBORING COSMID INFORMATION

The 5' cosmid is T10E9, 300 bp overlap; the 3' cosmid is F48A9, 4100 bp overlap. Actual start of this cosmid is at base position 197 of F57B10; actual end is at 6600 of F48A9.

NOTES:

Coding seqences below are the result of integration and manual review of the following data: computer analysis using the program Genefinder (P. Green and L. Hillier, personal communication), the large scale EST projects of Yuji Kohara (http://www.ddbj.nig.ac.jp/c-eiegans/html/CE_INDEX.html) and The C. elegans/Reme cloning project (http://worfdb.dfci.harvard.edu/), similarity to other proteins from BlastX analyses (http://blast.wustl.edu/), sequence conservation with C. briggsae using jim Kent's wARBA alignment program (Genome Research 10:115-1125, 2000), individual C. elegans GenBank submissions, and personal communications with C. elegans researchers. tRNAs are predicted using the program tRNAscan SE (Lowe, T.M. and Eddy, S.R., 1997, Nucl. Acids. Res., 25, 955-964).

source

complement(join(417. .623,676. .757,801. .970,1018. .1119, 1648. .1799,1873. .1966)) /gene="F57b10.8" 1. .36296 /organism="Caenorhabditis elegans" /mol_type="genomic DN." /strain="Bristol N2" complement(417. .1966) /gene="F57B10.8" /db_xref="taxon:6239" /clone="F57B10" /chromosome="I" gene CDS

/note="contains similarity to Oryctolagus cuniculus TROPONIN T, CARDIAC MUSCLE ISOFORMS (TNTC).; SW:TRT2_RABIT; coded for by the following C. elegans cDNAs: CEESL47F" /standard_name="F57B10.8"

/product="Hypothetical protein F57B10.8" /protein_id="AAB96725.1" /db xref="G1:2773208" /db_xref="WormBase:F57B10.8" /codon_start=1

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complement(join(2302. .2636,2689. .2796,2917. .3285, 3332. .3536,3616. .3711,3756. .3837,3943. .4067,4118. .4228)) /gene="F57B10.9" /note="contains similarity to Interpro domain IPR000169 (Eukaryotic thiol (cysteine) protease); coded for by the following C. elegans cDNAs: yk281el0.5" /standard_name="F57B10.9"

CDS

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This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from

FICE: This sequence may not be the entire insert of this clone. may be shorter because we only sequence overlapping sections ce, or longer because we provide a small overlap between

neighboring submissions.

once,

email: rw@nematode.wustl.edu and jes@sanger.ac.uk

Cambridge CB10 IRQ, England

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Glaser, P., Frangeul, L., Buchrieser, C., Rusniok, C., Amend, A., Baquero, F., Berche, P., Bloecker, H., Brandt, P., Chakraborty, T., Charbetouan, F., Couve, E., de Daruvar, A., Dehoux, P., Domann, E., Dominguez-Bernal, G., Duchaud, E., Durant, L., Dussurget, O., Entlan, R.D., Fshhi, H., Portillo, F.G., Garrido, P., Jackson, D., Jones, L.M., Kaerst, U., Krefft, J., Kunh, M., Kunst, F., Kurapkat, G., Madueno, E., Maltcurnam, A., Vicente, J.M., Ng, E., Nedjari, H., Nordsiek, G., Novella, S., de Pablos, B., Perez-Diaz, J.C., Tierrez, A., Vazquez-Boland, J.A., Voss, H., Wehland, J. and Cossart, P. Comparative genomics of Listeria species
                        AAAAATGTATTGGCTGAGTGGCTCGCCGAGCAAAAGTTTCGCAATTTCATTGTGCGGAA 23333
                                                                                            23573
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Listeria innocua Clip11262 complete genome, segment 10/12.
AL596172 AL592022
AL596172.1 GI:16414852
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                                                                                                                                                                           ACTGAGAAGTATCCTCATGTTACCTTCTTTTAATGGTGGTCGAGAAGTTCAATTCCAA
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Listeria innocua
Bacteria; Firmicutes; Bacillales; Listeriaceae; Listeria.
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Phone: +33 (0)1 45 68 89 96, Fax: +33 (0)1 45 68
Location/Qualifiers
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Submitted (09-JUL-2001) Glaser P., In Microorganismes Pathogenes, 25 rue du
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g C. elegans cDNAs:
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/product="Hypothetical protein F57B10.7"
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family); coded for by the following
CEESW25F, yk115g3.5, X89080"
                                                                VSDLHHSRKSSRLDOEVPALELKKAV*
complement(4552. .4987)
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complement(10.11452. .4666,4932.
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AVFIARLFGLEPASEHEIAHTEDELKI IVGESYKSGEINOSERRYWKIEDEDERMAK
EVMIPRTEIVTVDTGSTIGELSDIMONERTTRYPVIDGDKDHVIGVLINERLLSAVVE
HGSNPSKSIDPYVRTIRVIETIPIPIKELLFRWGRERSHIAILLDEVGGTSGLYVVEDI
VETVGDIREDERDADEIPERKIKOGHYIVDAKLLIDEVNNILGTEIEEEEVDTIGGW
COMPLAMMENT (join 7331. 7360, 7364. 8242))
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="lin2334"
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8543. .9397
/gene="lin2336".
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8543. .9397
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   1892. .5761
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KRQDLEERKKEVLLLVGLADSTHKKISTYSGGWRQRLGIAQAILHRPELLVLDEPVSA
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TKGELIRVENRHQSLEEIFWEKVR"
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KYNNONSLEPRNANDGTLYQSGAVLMDPATGGITALVGGGEBEHYFRGFNRATQNKAQP
GSTKKPLAYTPALQSGYNUDSAKLDEKYYKGNYPTNYGGIYNGBYPWYKAYANSI
NAPAVWLLDQIGIDKGVKSVEKFGIEVPEKDQTLGLALGGMSKGASPVEMATAYATFA
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VSGHEMAGKTGSTQVPFNDTNGTKDQMFVGYTPNLVGAVWMGFDKTDKDHYLTTTSSA
GVSSLAHYVMNSGLRYQKSADFDTKSAAQETAAKKQEEESDNNSGSDFWSGVKDKAGE
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                                                                                                                                                                          complement(731. .1633)
/gene="lin2330"
/note="similar to ABC transporter (ATP-binding protein)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(1936, .4080)
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                                                                /db_xref="taxon:1642"
complement(join(731. .1633,1644. .1649))
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4388. .4394
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/note="similar to arsenate reductase"
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complement(4086. .4091)
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complement(1644. .1649)
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4877. .4882
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213142 TTATTTTAGAAAAGGTGGCTCAGCTATATCTTTGCTGACCATGGTAACTCTGAAACAA 213083
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                                                                                                                                              CTGAAACAGAAAAATATCCACACGTAACATTCTTTATGAATGGCGGACGAAATGAAGAAT
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                                                                                                                                                                                                                                     TGGGTCTCGAACGTTATAAAGATCTTAATAGTTCGGTTCCTCACCCTAAAAATATTCAGA
                                                                                                                                                                                                                                                                                            TCACTGATAAAGAATGGGATCATTTCGACCGTGGGGCTAACCACCCTAAAAACATCAAAT
                                                                                                                                                                                                                                                                                                                                                     TTAGTGGGATGACCCAATACAATAAAGAGTTTCCATTTCCATCGTTATTCCCACCTGTGA
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Patent: WO 0228891-A 9 11-APR-2002;
INSTITUT PASTEUR (FR); CENTRE NATIONAL DE LA
SCIENTIFIQUE (CNRS) (FR)
   AATTTCTGAAACCAATTGTTTTTTCGGACGATGGGC -
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TSFLPDGVTYSLADEKEYRIDGFDSVVLAMGSRAYNPLEEAIKKIVPETYVIGDAVRA
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Pred. No. 2:8e-58;
0; Mismatches 648; Indels
                                                                                       oxidase"
                                                                                 /note="similar to NADH
                                                                                                                                              /transl_table=11
                              9467. .11392
/gene="lin2337"
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Pred. No. 2.7e-58;
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Listeria inocua, genome and applications

Listeria inocua, genome and applications

Patent: WO 0228891-A 4039 11-APR-2002;

INSTITUT PASTEUR (FR): CENTRE NATIONAL DE LA RECHERCHE
SCIENTIFIQUE (CNRS) (FR)

Location/Qualifiers

Location/Qualifiers

1. 34980

/organism="Listeria innocua"

/ma_Lype="genomic DNA"

/db_xref="taxon:1462"

/note="seq 2058, original length: 3.011.208 replaced
by-seq 2058, original length: 3.010.001 to
0.549.980-seq 4035: 0.500.001 to 0.449.980-seq 4034:
0.900.001 to 1.249.980-seq 4035: 1.200.001 to
1.549.980-seq 4039: 2.400.001 to 2.749.980-seq 4040:
2.700.001 to 3.049.980-seq 4041: 3.000.001 to 3.011.208"
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137916 AAATGAAAATGTTATCGGCGAAGTACTTTCTAATGAAGGTTTGTCGCAACTGCGTATCG 137857
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                                                                                   CATGCCAAACTTATAATTACGTTCTTATGGTTACTTCCGATCATGGAAATGCTGAGAAGA
                                                                                                                                                                  TCCAAGATGAAGAGCGTTGTATGGTTCCGTCACCAAAAGAAGTTGCTACATATGATTTAA
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                                                         CGGAAACTGAGAAGTATCCTCATGTTACCTTCTTTTAATGGTGGTCGAGAAGTTCAAT
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RBS RBS gene	RBS CDS Gene Gene Gene	GDS gene	gene RBS CDS
			<u> </u>
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CDS-GDS-GDS-GDS-GDS-GDS-GDS-GDS-GDS-GDS-G	gene RBS CDS - CDS	de d	gene CDS CDS

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AACCTGAAATGAGCGCATATGAAGTAACAGATGCACTTGTTGAAGACATTAAAAACGACA 133015 TTATTTTAGAAAAAGGTGGTTCAGCTATTATCTTTGCTGACCATGGTAACTCTGAAACAA 132835 132954 TTGAGCCAACGATTAAGGCAATCGAAGCAGTAGATGAAAATCTTGGTCGTGTAGTAGTAGC 132895 CGGAAACTGAGAAGTATCCTCATGTTACCTTCTTTTAATGGTGGTGGTGAGAAGTTCAAT 1078 GGCATCCTTTGGTTATGTGCAATTTTGCGCCTCCTGACATGGTTGGACÄTACTGGTAAAT 1258 1378 PAT 21-FEB-2003 Buchrieser, C., Frangeul, L., Couve, E., Rusnlok, C., Fsihl, H., Dehoux, P., Dussurget, O., Chetouani, F., Nedjari, H., Glaser, P., Kunst, F., Cossart, P., Daniels, J., Goebel, W., Kreft, J., Kuhn, M., Ng, E., Vasquez-Boland, J., Dominguez-Bernal, G., Garrido-Garcia, P., Tierrez-Martinez, A., Amend, A., Chakraborty, T., Domann, E., Haln, T., Terrez-Martinez, A., Durant, L., Perez-Diaz, J. C., Baquero, F., Gomez-Lopez, N., Maduenio, E., Ge Pablos, B., Wehland, J., Kaerst, U., Entian, K.D., Hauf, J., Rose, M. and Voss, H. Listeria monocytogenes genome, polypeptides and uses Pablos, B. Patent: WO 0101118-A 2862 11-APR-2001;
Location/Qualifiers TCCAAGATGAAGAGCGTTGTATGGTTCCGTCACCAAAAGAAGTTGCTACATATGATTTAA AACCAGAAATGAATGCTGCTGGAGTTGCCGAAAAATGGTCGAGCAAATTGAGTCAGGCA TTGAACCTGCCGTCAAAGCATGTCAAGCTACTGACGAGGCAATTGGAAAGATATTTGAAG 1319 CATGCCAAACTTATAATTACGTTCTTATGGTTACTTCCGATCATGGAAATGCTGAGAAGA TGATTGCTCCCGATGGTAGTGAACATACTGCACATACCTGCAATTTGGTCCCATTTACT Bacteria; Firmicutes; Bacillales; Listeriaceae; Listeria linear /organism="Listeria monocytogenes" /mol_type="genomic DNA" /db_xref="taxon:1639" DNA AX641672 349980 bp D Sequence 2862 from Patent W00101118. AX641672.1 GI:28474433 Listeria monocytogenes Listeria monocytogenes 1. 349980 1019 133191 1079 1139 1199 1379 133074 133131 132894 DEFINITION ACCESSION RESULT 8 AX641672/c ORGANISM BASE COUNT ORIGIN REFERENCE AUTHORS TITLE JOURNAL VERSION KEYWORDS SOURCE FEATURES a δ g δ g à g ò В ð q ò g

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128131 TCCCTGGTGAAAACCGGATTCTAATCAATTCGCCAA---AAGTAGAAACATACGATTTGC 128075
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13 DNA, complete genome, section 6/10.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shimizu,T., Ohtani,K., Hirakawa,H., Ohshima,K., Yamashita,A., Shiba,T., Ogasawara,N., Hattori,M., Kuhara,S. and Hayashi,H. Complete genome sequence of Clostridium perfringens, an anaerobic flesh-eater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (15-FBB-2001) Tohru Shimizu, Institute of Basic Medical
Submitted (15-FBB-2001) Tohru Shimizu, Institute of Basic Medical
Sciences, University of Tukuba, Department of Microbiology; 1-1-1
Tennohdai, Tsukuba, Ibaraki 305-8575, Japan
(E-mail:tshimizu@md.tsukuba.ac.jp, Tel:81-298-53-3354,
Fax:81-298-53-3354)
On Jan 14, 2002 this sequence version replaced gi:18144942.
Location/Qualifiers
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Clostridium perfringens str. 13
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
  CIGAAACAGAAAAATATCCACACGTAACATTTATGAATGGTGGACGAAATGAAGAAT
                                                                                                                                                                                                    1199 GCCATCCTTTGGTTATGTGCAATTTTGCGCCTCCTGACATGGTTGGACATACTGGTAAAA
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                                                                           TCCAAGATGAAGAGCGTTGTATGGTTCCGTCACCAAAAGAAGTTGCTACATATGATTTAA
                                                                                                                                                                        AACCAGAAATGAATGCTGCTGGAGTTGCCGAAAAAATGGTCGAGCAAATTGAGTCAGGCA
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complement(3 .5066)
/gene="CPE1281"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="genomic DNA/strain="13"
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/gene="CPE1281"
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/transl_table=11
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AP003190 BA000016
AP003190.2 GI:18146728
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128905 AGAACAAAGCCCTAAACAATGCTTTCACTCATACAAAGAAAACAACTCGGACTTACATC 128846
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                491 GAGATACTTCGCCAACAAGTGGAGCTGGTTATCTTGAACAACTTCTTCAATTTATTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              551 CGGAAAAGTACGGAGAATTGGCTACTATTACTGGACGTTATTATGCAATGGATAGGGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAGATGGGAGCGTATTAAGATGGCTTATGAGGCAATTGTTGGAGGTATTGGACAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATTTCTGAAACCAATTGTTTTTTCGGACGATGGGC------GAGTAAAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGTCTCGAACGTTATAAAGATCTTAATAGTTCGGTTCCTCACCCTAAAAATATTCAGA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAATCCTCAGATTGTTGCATCAGCTGAGCGTGCAAAGAAGGGGGAGTGGTCGATTGCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGATACTCTTATTTTCTTCAATTATCGTGCTGATCGTATGCGTCAAATTTGTGAATGTT
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                                                                                               Gaps
Length 349980;
                                                    24;
                                                    Indels
     DB 6;
                                               Mismatches 649;
  Score 312.6; DB
Pred. No. 6e-58;
                                                  ;
18.2%;
                                                    Conservative
                           Similarity
                                                    166;
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     Query Match
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                              Local
                         Best Loca
Matches
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/db_xref="CI:1814996"
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ILGILQYLKTLDFVKRINGMGKLESYNNASAIIGOSEPFISYRELGLI
PKHRLYTLCASAMSTVSMSIVGSYMVLLQPRYVVTAIVLNLFGGFIIASVINPYSUSA
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KIKITLDDGEYEVLTCSFEDLLYTNKRLPMYAKNDSENLWFQILGSGELYIKYNSCRE
QGEESIEKKIENIICLIEKENIEKVTVDLRNNLGGDSTLFTPLIDYLKNSEKINKKEN
                                                                                                                                           Anote="39,245a, similar to gp:D45912_25 pyilmidine motelosido, transport protein from Bacillus subtilis (393 aa); 71.78,4dentity in 392 aa overlap. Putative N-terminal signal sequence and 7 putative transmembrane regions were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EEDILVVEDEKKQTFFEVLGEYILDGFKŸAVIVAAMLVGFVÄIIAVINMIFRSIFGMS
FQEILGYVFSPFAFLMGVPLNESIQAASVMATKLVSNEFVAMNLLSSGTLNLSARSIG
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MAKGLFRSLCSNATGIIYALLIIKGSSIFPNEYWSYFLTAFFSFMWVIQAKFKKFEFI
SGAFCGCFSTFGLNGNWQAVIPALLCGNVLGYISQKIGIYÇHKVFSKI"
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NMFNELDYEEIKVEISRVVASLKDAHTSLIFPAKRFIPLKFYYFNDGVYIINTCKGYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LKVIIGRETFSSALLNAYTFKNSTNAKIIGEPSGGKPNCYGEILRITLPNSKLVITYS
TRFYKLIEEDSVAALYPEEVLLESIEDYINK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IVSVFLISFANFSSIGIISGAVKGLNQEQGNVVARFGLKLLYGATLVSMLTATIVGLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="150 aa, similar to gpu:AE004385_4 conserved hypothetical protein from vibrio cholerae (170 aa); 43.8% identity in 144 aa overlap. Putative N-terminal signal sequence and 1 putative transmembrane region were found by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein from Thermotoga maritima (strain MSB8) (718 aa); 22.8% identity in 487 aa overlap. 5 putative transmembrane regions were found by PSORT."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="871 aa, partially similar to pir:C72285
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/protein_id="BabB0992.1"
/db_xref="GI:18144948"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="365 aa, no significant homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product="hypothetical protein"
/protein_id="BAB80991.1"
/db_xref="GI:18144947"
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/gene="CPE1287"
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/gene="CPE1287"
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complement(9831. .10928)
/gene="CPE1285"
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                                 /gene="CPE1284"
complement(8189. .9370)
/gene="CPE1284"
   .9370)
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/gene="CPE1286"
11256. .11708
                                                                                                                                                                                                                                                                                                                                                                         /transl_table=11
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/transl_table=11
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/transl_table=11
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                                                                                                                                                                                                                                                                                          found by PSORT
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BARKRKWHWPDDWQITGLSARAGDKITVLYVDYAFGDFPTLLIKKGSLYOHGGATSFQL
KPGKNETITPINESNGIREDVOHGGGLFFTNY KSDSOKRAPKVRIEGASKYDVFIL
GKSDENEVMKELEAYVEKIKAEPKTTPNIFAVSSNKSLBFVQATYALDWYKKNNKTPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YTAEQWDQYTADAMGFWGFDNSKDVNSDFNFRIMPWYKNLSGGAFWNAGNGVIGIRPG
NODAILAANKGWGVAHELGHNFDTGGRTIVEVTNNMMPLFFESKYKTKTRITDQNIWE
NNTYRVGLDDYSNNELYNKADSTHLAQLAPLWQLYLYDNTFYGKFERPGFRERDFGMK
NREDIXKSWVVAASDAMELDITFFFRHGIRVDDKVKEDLAKTFYGFDKRIYYLDLAM
NYKGOGFTDNAKVSYSGSKGNIKLSFSVDDENKDNILGYEIRROGKYVGFTSNDSF
VDTKSNLDEDGVYVVTPYDRKLNTLNPIEVNALQPTLSVNPYITLALGEEFNEEEYIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YFBSYVGYDKAMSSRPASSVIFKVLVDGEEKFNSGVMRSTTPOKYVKVDVKNAKELKL
IVNDAGDGDSSDHASFGDAKLATLSSKPIIKCENLAYNMDEKVDLMKGITATDIEDGN
ITSKIQIKSSDFVEGKSGIFKVYSVTDSDGLTSECSRTIAVTDKETQLSDLNWKSAT
                                                                                                                                                                                                                                                                                                                        SSSFNIEVEVERENDLYTLDRIVYGSRQSDLKCFAEEVY IYASRTSKGDIYKLVATGAH
EATKGLVEAKFEPTEFKRVKFKFKKSKQNSATLNELMFYKPDEVYSSIPKLFTDGTMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AKDIKGNSLSESVKVKSSNVNTSKVGEYEVLYSLEDSKGNEYTKTSKVNVVSRKEYMS
DLTPRQSSNGWGTVRKDKSISGGVIGLTRDGDFVDYNKGLGLHSNAETVYDLEGKDYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SKDKETINSALEELNKAMDSLVKVDLNAVINIPDKYLLKSIQNQLNKTGDITLGDMYS
LTTLTLSGVEDLSGLENAKNLETLNMDYNEVKDLRPLSKLKKLNTLNAQEQFIAAGEL
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LAFIFWFFRYSSTYWRLDDISLLLYPSVLAATVGALGSKYSKKIGSKQZOMAIV
GIIVSLIIGALFVXSVLVFIFVMILFSSSRALMYARNIDTLFRTIPKEKTGFALGFY
NFCLNIATSIGITYVAIFMETKYLGKNFTGLFSDLVAIQYSNVLIVLAVISLVALVY
                                                                                                                                               ESHQARVSKFDLYNSDKLDAYNQEFQINRSNIKSITNNGGKYNSSTIDKAIDGNLETH
                                                                                                                                                                                    WETGK PNDSNFTNEVVVTFNEITNIDRIVY SARRDSARGKGFAKEFEIYASLKDEGDD
                                                                                                                                                                                                                      FNLVSSGEYTESTRDLVEIKFNPTDFRRLKFKFKRADQNWASSAEFWFYKEDKLNEKF
NGLFTDSSMNKVSEEFNTLEKLNAFENELKDHPMYDLYKEGLNNARAILTETSENPTK
                                                                                                                                                                                                                                                                                          ATLGQITYNLNDDYNNQYRMPYTNIKSIKNNGRHYAAQNIEKAIDNDVNTYWETGTLN
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/db_xref="GI:B414944"
/translation="MDISLNTLENVEEVXIKKAVPAVLALMIFALVIDNSFKIISPDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AKAFNISATAVSWQVTLAGLVIGIGAVVYASLSDSISVRTLLVLGIILICVGSLLGFFI
FQKSFLIIVISRIIQSAGLGSAETLYVIFIAKYFKESEHKKYLGFSTSSYAISQVIGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AKSFGVSRWTLRQALALLQDDGLVKNIRGKGNFIISPEKCAKRDFLELIGNPIYKCHT
EKTODIEVPRELEDSDYTRQVLEKDSTAVVACERYYKSKNKYLAYAPTFISVBEVKE
EKTDLNNESELLDFLEHKSYEISESSILEIKHSSAGNSLNPKYKLVGGNQCDLVLETL
YANDYSPPILENKYTISQYSTEKIKARKE'
                                                                                                         /translation="MNKRKIAAIILATMITNLSATTIDVLAQELNTKNNSKVEVSHDD
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protein from Bacillus cereus (441 aa); 25.5% identity in
377 aa overlap. 13 putative transmembrane regions were
found by PSORT."
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protein"
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/db_xref="GI:18144945"
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/gene="CPE1282"
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/gene="CPE1282"
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/322, 8071
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/gene="CPE1283"
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Submitted (13-JAN-1999) Biochemistry, University of Connecticut
Health Center, 263 Farmington Avenue, Farmington, CT 06032, USA
Location/Qualifiers
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                                                                                                                         TGCTTCTCAAGGAGTTACTCAATTTCACTGTGCGGAAACTGAGAAGTATCCTCATGTTAC
                                                         Bacillus megaterium
Bacteria: Firmicutes: Bacillales: Bacillaceae; Bacillus.
1 (bases 1 to 1654).
Canader.M., Setlow.P., Lamani.E. and Jedrzejas.M.J.
Structural studies on a 2,3-diphosphoglycerate independent
phosphoglycerate mutase from Bacillus stearothermophilus
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/mol_type="genomic DNA"
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Chander, M., Santiago-Lara, L.-M.
Direct Submission
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NIVSKYTYTGGIKOLNFPHIDKTTEIEKMKMINNYLHISNKRIVFIIDNLDRAEK
ENIILLFKLVNNVFNFEVYTILSFDDMKLKKILENOLDIDYFFISKIVOLPIKIPDL
DLEVKMRYTSTGCRDNLEKTNDLINGLKSKILDMRDFKRFIVDPL
DLEVKMRYTSTGFTRITRLYGEDNLEKTNDLINGSKRFINSVYSHYK
NCEMLAPIDLISIELINFYNROLYISIKENPEYTSSOLYFPENETGKRFINSVYSHYK
RKFFIKLKENNNFIFRELISKYFPYVKRYINSYPILEDSRYIUDKKRFINSTANM
RIYSAKTFSLKFENRENFIKISKIDDFINLVNNTSNEKTIGEKKLICLEYYCSW
ETIFFTLONRIDSIYSFTKALLENINIFENDSLYFGINGLTRILILISMLEN
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TYKYFIRRTYLDMFSSKEEVDEILDRCKSFNEDEKFVLDRYKKMKLDKKNDEDMNNUD
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11 Similarity 53.3%;
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Bacillus cereus ATCC 14579 section 17 of 18 of the complete genome.
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Bacteria; Firmicutes; Bacillales; Bacillus Bacillus
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Ivanova,N., Sorokin,A., Anderson,I., Galleron,N., Candelon,B.,
Ivanova,N., Sorokin,A., Rezalik,G., Mikhailova,N.,
Lapidus,A., Chu,L., Mazur,M., Goltsman,E., Larsen,N.,
Walunas,T., Grechkin,Y., Pusch,G., Haselkorn,R., Fonstein,M.,
Ehrlich,D.S.D., Overbeek,R. and Kyrpides,N.
Genome sequence of Bacillus cereus and comparative analysis with
Bacillus anthracis
Nature 423 (6935), 87-91 (2003)
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                     'db_xref="taxon:1404"
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  /strain="QM
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Best Local Similarity 52.4%;
Matches 737; Conservative
                                                                     /gene="pgm"
34. .1569
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GDPLYSTITAGNLVOTGNVTLGLTTDHYGROSLGYKTNKMTVDVDNDDSTFNSSTGAF
PTIPAGSKVKKAYLFWTAAMGTPTYPSKEYRVSDADVREPVKMKMGNKGYAEVSADSI
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RGRVKVDEYMHAPGYEDVFNVGDAALIINEEINRPYPPTAQIAIQQGYNIAHNLTVLV
RGKGEMKRPAFDNKGSVCSLGHDDAMGVVMGKKLTGWKASFMKKVIDNRYLFLLGGPL
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GEKLPENKVADFYVEEKDKGGKVLSSNLKIRDLKSHEKMTVLIKASRTQHFNKEYKQK
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YLVIGLGFESETFGITGLKEHAFSIANINATREIREHMEASFSKYATEQRDELVTIVV
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                                                                                                                          Kapatral, W., Sorokin, A., Anderson, I., Galleron, N., Candelon, B., Laphdus, A., Chui, L., Mazur, M., Golfsman, E., Larsen, M., D'Souza, M., Baldus, T., Grechkin, Y., Pusch, G., Haselkorn, R., Fonstein, M., Direct Submission

Submitted (12-MAR-2003) INRA, Genetique Microbienne, Domaine de Vilvert, Jouy en Josas 78352, France

Location/Qualifiers

1. 300854
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                                                                       and Sorokin, A.
Bacillus cereus
                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Bacillus cereus ATCC 14579"
/mol_type="genomic DNA"
/strain="ATCC 14579"
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                                                                       , Ehrlich, D.S.
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/locus_tag="BC4927"
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CDS

TITLE |

TITLE

FEATURES

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Pred. No. 5.6e-55;
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52.6%;
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8; Conservative
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VSGKLVBOKEKEPTFSTFAIRASFTGIILTYIIGTTYMYGAVNLFMGGNMSYKAAWMIMM
WFAVKDIVFTIIGAIIAPRIYYAVRRSAXQHSHSTIS"
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YIEYOINRPSFRINESDSKFONKLNFYKKRDINEKRTRLLENDAKKYYKEREGSSFPHP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SSTNEIFLRPETAGGIFVNFKNYQRSMRKKLPFGIGQIGKSFRNEITPGNFTFRTREF
EQMELEFFRCKFGEDLEWFAFWRETCKNWLLSLGMTEESMRLRDHGEEBLSHYSNATTD
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MYDFDETGSIGKRY RRQDEIGTPFCITYDFDSVEDKAVTVRDRDTMEQVRMPISELKG
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      'db xref="GI:30259632"
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                                                                                                                                                    Read, T., Peterson, S., Tourasse, N., Baillie, L., Paulsen, I., Nelson, K., Tettelin, H., Fouts, D., Eisen, J., Gill, S., Holtzapple, E., Okstad, O., Helgason, E., Rilstone, J., Wu, M., Kolonay, J., Beanan, M., Dodson, R., Brinkac, L., Gwinn, M., DeBoy, R., Madupu, R., Daugherty, S., Durkin, A., Haft, D., Nelson, W., Peterson, J., Pop, M., Khouri, H., Radune, D., Benton, J., Mahamoud, Y., Jiang, L., Hance, I., Weidman, J., Berry, K., Plaut, R., Wolf, A., Watkins, K., Nierman, W., Hazen, A., Thomason, B., Friedlander, A., Koehler, T., Hanna, P., Kolsto, A.-B. and
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Nelson,K., Tettelin,H., Fouts,D., Elsen,J., Gill,S., Holtzapple,E.,
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Durkin,A., Haft,D., Nelson,W., Peterson,J., Pop,M., Khouri,H.,
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Eline,R., Plaut,R., Wolf,A., Watkins,K., Nierman,W., Hazen,A.,
Cline,R., Redmond,C., Thwaite,J., White,O., Salzberg,S.,
Thomason,B., Friedlander,A., Koehler,T., Hanna,P., Kolsto,A.-B. and
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                                    Bacillus anthracis str. Ames
Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus; Bacillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The genome sequence of Bacillus anthracis Ames and comparison to closely related bacteria Nature 423 (6935), 81-86 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (26-MAR-2003) The Institute for Genomic Research, 9712 Medical Center Dr, Rockville, MD 20850, USA
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region. Best Hits not completed. Putative attL/R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(170087. .186845)
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90. .803
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                                                                                                   Teus group.
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SOURCE
ORGANISM
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189030 ACCGTGACAAGCGTTGGGATCGCGTAGAAAAATGTTACCGTGCTATGGTGATGGTGAAG 188971 188970 GCCCTACTTATAAATCAGCAGAAGAGTGTGTAGAAGACTCTTATGCAAATGGTATCTACG 188911 188671 189090 TAATAAAAGAAACAGGAGTAGGACAATTCGCGACTATCTCTGGTCGTTÄTTACTCCATGG 189031 188910 ATGAATTCGTATTGCCGTCTGTAATTGTTAACGAAGATAACACGCCAGTTGCAACAATCA 188851 188731 188611 188551 188194 1012 1072 1132 601 721 832 421 481 833 AATGTTTGGGTCTCGAACGTTATAAAGATCTTAATAGTTCGGTTCCTCACCCTAAAAATA 188730 CAGAATTCGTATGTATGACACACTTTAGTGAAACAGTGGATGGTTACGTGGCATTCAAGC 188670 CAATGAACCTTGATAACACTTTAGGTGAAGTTGTTGCGCAAGCGGGATTAAAGCAACTTC 1073 ITCAATTCCAAGATGAAGAGCGTTGTATGGTTCCGTCACCAAAAGAAGTTGCTACATATG 188550 CTGAATTCCCAGGAGAAGAGCGTATCTTAATTAACTCACCGA---AGGTTGCAACGTATG 1133 ATTTAAAACCAGAAATGAATGCTGCTGGAGTTGCCGAAAAAATGGTCGAGCAAATTGAGT GTAAATTTGAACCTGCCGTCAAAGCATGTCAAGCTACTGACGAGGCAATTGGAAAGATAT 188313 TAGAAGCGATTCTTGCAAAAGATGGTGTAGCACTTATTACTGCTGACCATGGTAATGCTG 188253 ATGAAGAATTAACTTCTGAAGGAGAACCAATGACAGCTCATACAACTAACCCGGTTCCTT GATTGCATTTATTAGGACTGGTTAGCGATGGTGTGTCCACTCTCATATTGATCATCTTT CACTTCATTTATTCGGTTTACTTTCTGACGGTGGTGTGCACAGTCACATGAACCACATGT CTGATGGTCGAGATACTTCGCCAACAAGTGGAGCTGGTTATCTTGAACAACTTCTTCAAT TTATTGCTTCGGAAAAGTACGGAGAATTGGCTACTATTACTGGACGTTATTATGCAATGG ATAGGGACAAAAGATGGGAGCGTATTAAGATGGCTTATGAGGCAATTGTTGGAGGTATTG GACAAAAAGCCACCGTTGATAAGGCTGTCGATGTTGTTAGAGAGCGATATGCTCAATCTG -----TAA 773 AAGATGACGATACTCTTATTTTCTTCAATTATCGTGCTGATCGTATGCGTCAAATTTGTG TTCAGATTAGTGGGATGACCCAATACAATAAAGAGTTTCCATTTCCATCGTTATTCCCAC 1013 ACTGTGCGGAAACTGAGAAGTATCCTCATGTTACCTTCTTTTAATGGTGGTCGAGAAG 1193 CAGGCAGGCATCCTTTGGTTATGTGCAATTTTGCGCCTCCTGACATGGTTGGACATACTG 188433 ATGATAAACATGATGTTATCATTCTTAACTTTGCGAACTGTGATATGGTTGGCCATTCTG AGAAGATGATTGCTCCCGATGGTAGTGAACATACTGCACATACCTGCAATTTGGTCCCAT CTGTGACTCATACTAATGTGCTTGCTGAATGGCTTGCTTCTCAAGGAGTTACTCAATTTC 1313 ITGAAGCATGCCAAACTTATAATTACGTTCTTATGGTTACTTCCGATCATGGAAATGCTG 362

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DILSIIDKYYEQNISDEFLPPTKISMHNIVHNDSLIFFNFRDBRIRQLLHSFAKPNFK
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Eukaryota; Rhodophyta; Florideophyceae; Ceramiales; Ceramiaceae;
Antithamnion.
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the thylakoid protein import
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Submitted (28-FEB-1992) K.U. Valentin, Dept of Botany KB-15,
University of Washington, Seattle, WA 98195, USA
Location/Qualifiers
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ATPase, orf 179; orf 510; secA gene; secretory protein.
chloroplast Antithamnion sp.
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/note="orf 179 is a putative homologue to
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93173098
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/gene="secA"
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Valentin, K.U.
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KPWIKYILNALKAKEIFIKNKDYIVKNNEIVIVDEFTGRIMEGRRWSDGLHQAIEAKE KQYIQQENKTLASITYQNIELLYSKEKSGMTGRAKTEBRALEQYIYKLKVVEIPYRKLNO RKDLSDLVYKTEYVKWRAVANECFDMYQIGRPTLVGTTSIEKSELLAKILKELQOVPYN LLNRKPENITTRESEIITQAGRKYTITISTNMAGRGTDIILGGNPQILAKTALTIHINK ILNLTOYNTWY I IENETY ILNS INNTLL INNIDINSODISOSINNIINNNMODAKS
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TYIRQTVIYLTMRSRLIVNIDH" QYSCDITYLINSELGFDYLRDNMAIQKEDLVQRDFFFAIIDEIDSILIDEARTPLIIS GPANNKLTEYLEANKVANLLNQNTDYEIDEKNKNIILNENGIKKSENILDINNLYDIQ OIIATODIDTILPKAFAITKEAIKRATGLLLFDVQLIGAIILNQGKIAEMKTGEGKTL

1547 t 646 g 679 c

ŝ Gaps 18; Length 5111; Indels Score 291.4; DB 8; Pred. No. 5e-53; 0; Mismatches 676; 17.0%; Similarity 52.4%; 765; Conservative

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181

241 419

301

479 361 AGTITGTIACAAATCCTCAGAITGTIGCATCAGCTGAGGGCGTGCAAAGAAGGGGGAGTGGTC

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601 TTATTGCTTCGGAAAAGTACGGAGAATTG3CTACTATTACTGGACGTTATTATGCAATGG 661 ATAGGGACAAAAGATGGGAGCGTATTAAGATGGCTTATGAGGCAATTGTTGGAGGTATTG

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836 721 GTAATCAAAACTCTTCTTCTGATATACTA'TCAATCATCGATAAATATTATGAACAAAATA 896 781 TCTCTGATGAATTTCTACCACCAACTAAAATATCGATGCATAATATTGT---TCATAACG AGACTGACGAATTTCTGAAACCAATTGTTTTTCGGACGATGGGCGAGTAAAAGATGACG

841 ATACTCTTATTTTCTTCAATTATCGTGCTGATCGTATGCGTCAAATTTGTGAATGTTTGG

Childress,D., Zeng,Q. and Smith,D.R. Direct Submission Submitted (24-JUL-2001) GTC Sequencing Center Production, Finishing, and Bioinformatics teams, Genome Therapeutics Corp., 100 Beaver Street, Waltham, MA 02453-8443, USA /translation-"MNLDFELNLTQQQKLVWTQQMQMSIKLLQMSNMELNEYIRSEIE ENPLLDGKEVIKNDEYQSEMSKYDYKEFIKYLDFDWYTHENYSYRSEEEVSFPNFIG SKRSFTEYLLDQLREISIDSETRHICEYIIENLDRDGYLRDSLEDIGMAVHKELKSVQ NALNVYQSLEPIGYGARNLARCLKLQIYVRNYNDFKLIEIIDKHLGNIABNKYGVIAK ELNITPKEAQEYGDYIKKLEPKPSRGFFTGEBYKYVVPDAFIRKIDDFYVINDSII PKLSINNTYKNILNTENDKKDVDYVKEKLNSAMFLLKSIEQRKTTLYEVLNEILRYQK AYSYGENTVIERMILKDISEKLGMHESTISRAIREKYVYIDTKGLVKIRDMFTTGIAS AYSYSEKDKYDKONSYGKIKNEIRDLIEKENKKSPLSDQKLSEILKEKGMNISRRTVAKYR EEIGIKSSAKRKRY" SYSPRYQNTVVVPARGGMERNLOTEANTLAANFADKLGASYKLIHVPDNLSNEALSTI INEKSIKNAIDTIRKADIIIYGVGRADEMSKRRGLSEDEISHILGSGSVAEAFGYFFD KEGNVVYHTPSLGLKTEDIKKAKNIIAVAGSKLKAEAIVATQINGRGNILITDEGTAK EKAEAHVRAGAKKVVISAPAGNDLKTIVFNVNNEDLDGTETVISGASCTTNCLAPMAK VLNDKFGIEKGEMTTIHAFTNDONTLOGPHRKGDLRRARAAYSILDRSGAKKAISO VIPDLAGKLDGNAORVPPTGSITELVSVLKKKVTVEEINAAMKEAADESFGYTEDPI VSADVVGINYGSLEPATLTKIVDVNGSQLVRTAAMYDNEBÄSTSQLVFTLAYFAKIAK GIGERVVRTEINFLKKONLINISNPGMSVTKDGEEIIOKLKNFTREFKCLTDIEEFIR INLNIKKVIIVPGDIDEDSTVMNEIGRTAAKFIQSIILDGGIVAITGGTTMKTVVDNY /db_xref="G1:15023589" /translation="MAKIAINGFGRIGRLALRRILEVPGLEVVAINDLTDAKMLAHLF KYDSSQGRFNGEIEVKEGAFVVNGKEVKVFAEADPEKLPWGDLGIDVVLECTGFFTKK /translation="MHEILKLQQKIVPELMDLLEKRYDILRTIKYNQPIGRRILANKI /product-"Glyceraldehyde 3-phosphate dehydrogenase, gene /product-"Putative transcriptional regulator" /protein_id="AAM78685.1" /db_xref-"GI:15023588" sigma-54 factor' acetobutylicum"

gene

gene

CDS

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EKIKGKKEETVVSTLLLRSLKQARY SPECSGHFGLAARY YCHFTSPIRRY PDLIIHRI
MKEY INGRMDEKRSKKLIGEVDYASMQSSEMERVAQEAEREVDSLKKAEYMADRVGEE
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1454 c 2415 g 3469 t
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LAMSCFMEIDPTGKVIQHEIFFESIIKTNERMTYTDVTKILRDHDEETIKAFEYLYDDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FIPKGEKNGAKSGDVVVAEITVWPKKRRNPEGKIVEIIGSKGEKGVDILTIIKKHKLP
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Pred. No. 3.5e-52;
); Mismatches 618;
                                                                                                                                                                                                                                                                                                                                          /protein_id="AAK78692.1"
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                                                                                                        9775. .11967
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ilarity 53.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                /product-"Triosephosphate isomerase"
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VIAYEPIWALGFGKTATDEQANETIGAIKKTVEVWFGKEVAEKVRIQYGGSVKFNIT
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TENKSKLGANAMLGVSLAVARAAAEYLGISLYQYLGGVNAKVLPVPMMNIVNGGKHAD
NNVDFOEFMIMPAGAPSFSEALRSCAEVYHTLKSLLQSKGLETAVGDEGGFAPNLNSN
EEAIQIILEAVTKAGYEPGKDWFIAMDPASTEFYENGYYNLKGEGKVYTSEEWWEVYA
                                                                             TIKYLSEHGGKVILCSHLGKAKGPDPSKTLAPVAKRLSELLGREVKFAADDTVVGENA
KKAVAELKEGEIVLLENTRFRPEEGKNDDAFSKDLASLADVYVNDAFGTAHRAHCSTV
                                                                                                                                                    LIIGGGMATTFLKAGGTIGTSLLEADKVDYAKEMIEKAEAKGVKLLLPIDNIVGAEF
KADTKAVTTEDANIPEGYMGLDIGPKTQKLYADAVKEAKTVVWNGPMGVFEFENFAKG
TKDVAKAMAESDATTVIGGGDSAAAVNQLGFGDKWTHISTGGGASLEFLEGKELPGIV
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NVLENDSTLHLMGLLSPGGVHSHTNHLKGLLQLAKKKNVKKVFVHAFLDGRDVPPSSA
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AVDASYHDNKTDEFVLPTVIVKEGKPVATIKDKDSVIFFNFRPDRARQITRAIAEEAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGFKRDRLNI EFVTMTEYDASFKGVDVAFGPEN ITNTLGEYVSNKGLNQLRIAETEKY
AHVTFFFNGGVEEPNKNEDRALI SSPKVATYDLKPEMSAY EVTDELLKRLDEDKYDMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILNFANPDMVGHTGILEAAKKAVETVDECLGKIVDKVLKIDGSVFITADHGNSEQMID
YSNGKPMTAHTVNPVPFVVSNHTEAKKLNEGVLADIAPTMLQEMGLEKPEEMTGKSL
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NSILIKLNQIGTLTETLNAIEMAQRAGYTAVVSHRSGETEDTTISDLVVAVNAGQIKT
GAPARTERVAKYNQLLRIEEELGEVAEFRGLNAFYNIKK"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MAKKPVMLMILDGFGISDKVDGNAVKAASKPNFDKYFNNYPHTH
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/product="2,3-bisphosphoglycerate-independent
phosphoglycerate mutase gene"
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/db_xref="G1:15023592"
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/transl_table=11
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'transl_table=11
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/gene="CAC0712"
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/gene="CAC0712"
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/gene="CAC0713"
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/gene="CAC0714"
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/gene="CAC0711"
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DEFINITION ACCESSION VERSION KEYWORDS

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270 (5235), 397-403 (1995) Sclence JOURNAL MEDLINE PUBMED REFERENCE AUTHORS 6917 GAGATAACAGATGGGAAAGAAGAACTTGCCTACAATGCAATGGTTCTTGGAAAAGGTG 6976

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VEKNHSKIHLIGLFSNGGVHSHNEHLLALIELFSKHAKVVLHLFGDGRDVAPCSLKQD
LEKLMIFLKNYPNVVIGTIGGRYYGMDRDQRWDREMIAYKALLGVSKNKFNDPIGYIE
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WYTLDELVOVQQLITKVQQEFNETKKFKLGIMIETPSAALABDCLGKHVDFFSIGSN
DLIQYSFAADRMKNYSYLQQENBELRLIKLIKLVVEGGKLNNVWTGMCEMASDOYAI
PLLICLGLGTFELSMASSMFRARMYINTITINBCKSLVERALKIJSDSAVRLIVENFFK
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VPEFERENLFFYTWMYEGIYPSERAFPPOTIKNSLGEYIANNNLKOLRIAETEKYA
HVTFFFDGGFEVNLSNETKTLIPSLKYATYDLAPEMSCKAITDALLEKLNNFDFTVLN
FANDDWYGHTGNYQAIRALEALDYOIKRIYDFCKANGITMFLTADHGNAEVYLDNNN
NPVTKHTINPVPFVCTDKNVNFNQTGILANIAPTILEYLNLSKPKEMTAKSLLKNNN"
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VGINGRKGIVGFDFSSKDITOWKQEKELESNFONELKOYTNKLVKTLDGYEVIVASNI
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LRSLEFKEIITKAFNKAKNDQERKVFSLYVKGYKNFEIAKKLNISPRRVRYLLDLFKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="nac72450.1"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MKNNISDVKLGLLAAKIYWKSWRFLELTEDDIISIALHAEQDSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IAVDNVFQQTALMFSEMDDKYFKERASDILDLHQRLLSYLTGVKLNDLIRIKSDVIIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSSAFQKAKKDLEEIKTITVKNINQEAGMIFDAHIQILNDPTITEQLEQQLNKNIHPV
                                                                                                                                                                                                                                                                     percent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="similar to GB:U00089 SP:P75168 PID:1673880 percent identity: 73.95; identified by sequence similarity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /hote="similar to GB:U00089 SP:P75167 PID:1673879 percent
identity: 71.23; identified by sequence similarity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="phosphoenolpyruvate-protein phosphotransferase
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/gene="MG431"
complement (6013..6747)
/gene="MG431"
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/gene="MG430"
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/transl_table=4
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                                                                                                                                                                  2263. .2778
/gene="MG428"
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/gene="MG428"
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FASVINGKLFACLKASMQVVLCIGESLÄGGEISFLKTPLTNCLDTIDKSLIKNLVAYE
PLWALGTGKTATPEVANQTIKTIREYINDLYDENDANNISILYGGSVDHNNIQKLAIM
EQIDGFLVGRASLEINNELEMARVYA"

complement(6807..8003)
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WYSEKKYKDTOGILMILNTSFIIGYTOTYLTGSLSVQSYVODDKHQFFGAFFLSP
NLVFTLLMNYUGLFTSFYFRYQFVKVEVYCKHIEKIRNYLLDNQOMFSIFMERAEG
SYSRQKTQVLVTNCLLIKAAKLLEDVRKFDRDALFSIIFIKKLDGYIYDRRTNKQTKH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FFWGLLGVIFVQFSGLYDIGMASISQGLARLVNFFITSQNINVDSATIFNAIFWLTQI
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                                                                                                                                                                                                                                                                                                                                                                                                               /note="similar to GB:U00089 SP:P75166 PID:1673877 percent identity: 73.64; identified by sequence similarity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        percent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 335 CTGAGCGTGCAAAGAAGGGGAGTGGTCGATTGCATTTATTAGGACTGGTTAGCGATGGTG
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/gene="MG433"
/note="similar to GB:U00089 SP:P78009 PID:1673876
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Pred. No. 1.2e-51;
0; Mismatches 662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAC72453.1"
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                                                                                                                                                                                                                                                                                                                                                                  complement(6807. .8003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="conserved
                         identity: 68.44;
putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                           identity: 73.64;
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/transl_table=4
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8089. Ann
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52.4%;
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5608 ATGCAAAGGTAGTATTACATTTAGTGGTAGGTAGATGTAGCACCTTGTAGCTTAA 5549
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                                                                                                          TCGATGTTGTTAGAGGGGATATGCTCAATCTGAGACTGACGAATTTCTGAAACCAATTG
                                                                                                                                                                                                                                     CTGAATTGAAACGAAAAGAAAATTTATTTTTTGTAACAATGATGAATTATGAGGGAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITCTCAAGGAGTTACTCAATTTCACTGTGCGGAAACTGAGAAGTATCCTCATGTTACCT
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                                                        5548 AACAAGATCTTGAGAAATTAATGATATTTCTAAAAAACTATCCTAATGTTGTTATTGGAA
                                                                                       CTATTACTGGACGTTATTATGCAATGGATAGGGACAAAAGATGGGAGCGTATTAAGATGG
                                                                                                                                                  CTTATGAGGCAATTGTTGGAGGT-----ATTGGACAAAAAGCCACCGTTGATAAGGCTG
                                                                                                                                                                                                                                                                  TTTTTTCGGACGATGGGCGAGTAAAAGATGACGATACTCTTATTTTCTTCAATTATCGTG
                                                                                                                                                                                                                                                                                                                           CTGATCGTATGCGTCAAATTTGTGAATGTTTGGGTCTCGAACGTTATAAAGATCTTAATA
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CT 4596
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Search completed: August 4, 2003, 13:38:31 Job time : 4241 secs